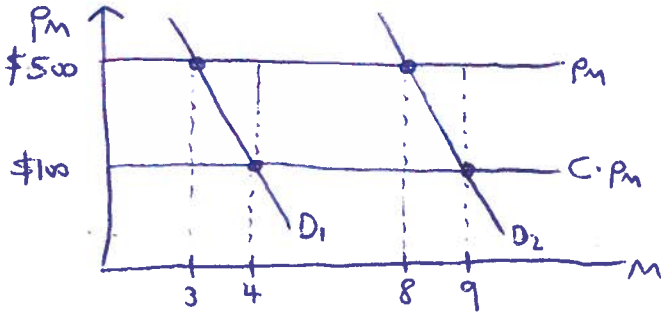
Health Economics
Instructor: Jim Marton

Homework Assignment 8

1. Consider the problem we worked through in class. The purpose of this homework question is for you to be able to replicate the results. We are assuming that Pm = $500, C = .20, and L = .10

State of the World	Probability	Uninsured Demand	Insured Demand
1	$\pi 1 = .30$	m1 = 3	m2 = 4
2	$\pi 2 = .10$	m3 = 8	m4 = 9
3	$\pi 3 = .60$	m5 = 0	m6 = 0



   a. Calculate the expected benefits, E(B), the insurance company will have to pay.

   b. Calculate the premium, R, charged by the insurance company, ignoring any tax subsidy.

   c. Calculate the expected welfare loss, E(WL), from buying this policy. (HINT: the expected welfare loss is the sum of the areas of the two triangles times their probabilities.)

   d. If the risk premium associated with this policy is $220, how much would the consumer be willing to pay for the insurance?

   e. Is there a net welfare gain associated with buying this policy? If so, what is it?

2. Now suppose the consumer in problem 1 has a marginal tax rate of t = .30.

   a. How much money would the consumer have to pay in taxes if they bought this policy with premium R on their own?

   b. What is the new net welfare gain associated with buying the insurance policy if we take into account the tax subsidy?

3. Suppose you are in charge of allocating health insurance for different types of diseases. What are the criteria you should use to decide which diseases should be insured and which should not be insured? For example, would you be more likely to insure brain surgery or therapist visits?

4. Phelps points out that BLUE plans offer insurance policies that are very different from the "optimal" type of policy demanded from a rational utility maximizing consumer. Describe this difference.

5. Why does an HMO do a better job of controlling health care expenditures than a standard FFS style insurance plan?